DRIVER

OCTOBER 1982

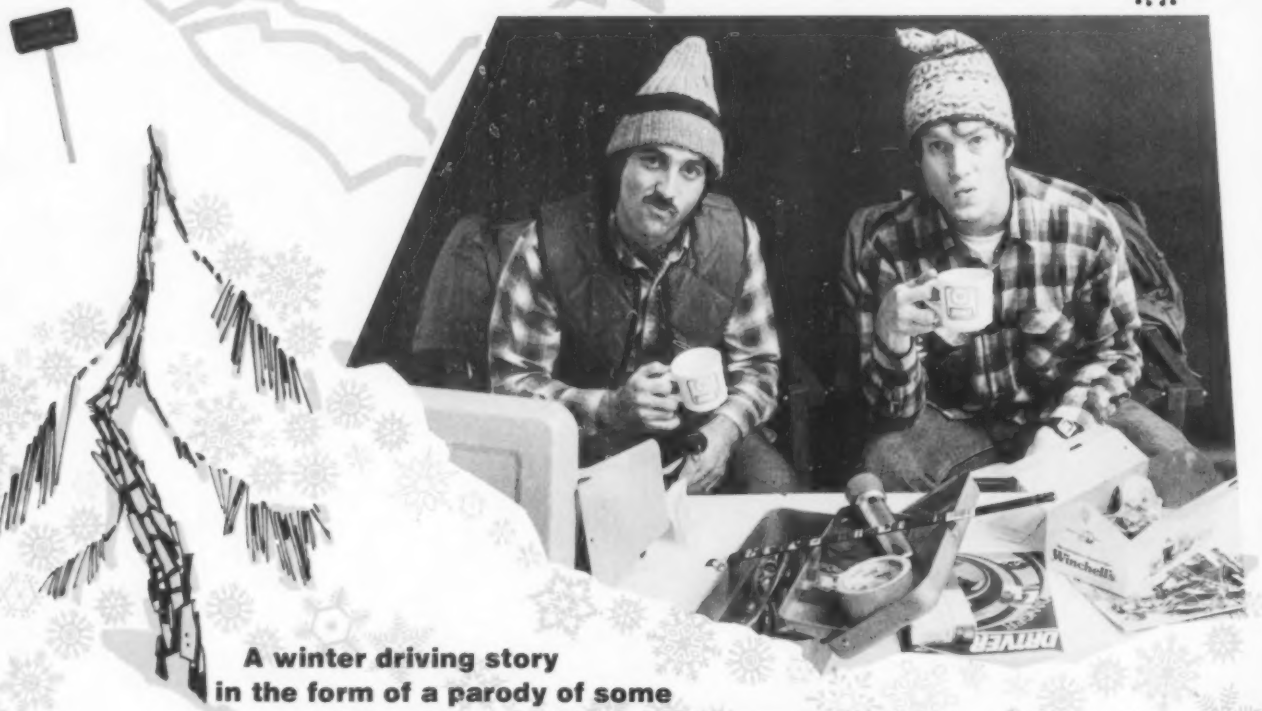
THE GREAT WHITE-OUT

with BOB and DOUG McFRENZIE

DRiVER

The Great WHiTE-OUT

"So, like, welcome to our article, eh?"



A winter driving story in the form of a parody of some characters on "SCTV," with our apologies to the originals.

Bob: Good day. I'm Bob McFrenzie and this is my brother Doug.
Doug: How's it goin', eh?
Bob: Welcome to our interview. Our topic today is driving in the winter. We're calling winter "The Great White-Out." Kinda clever, eh?
Doug: Beauty.
Bob: I'm, like, an expert in the field, 'cause I have to drive in snow lots of the year 'cause it's cold up here.
Doug: Yeah, you're an expert in the *field,* you hoser. Me, I try to stay on the road.
Bob: Okay, like, we're both experts. And we're gonna tell you how to drive so you don't end up in an eight-foot snowbank somewhere.
Doug: Yeah, the best way is to not go driving anywhere when it's cold.
Bob: Take off, eh? They gotta drive when it's cold, just like we do. They gotta go to work and they gotta go to the bank and the donut shop and important places like that.
Doug: Oh, yeah. So, like, go driving but don't do anything dumb, eh?
Bob: Right. Be prepared for the worst. You gotta have the car ready to go before the snow hits or you'll freeze yourself working in the slush.
Doug: Fix the car up real beauty. Look around at all the stuff you made temporary repairs on, like the hole in the muffler. Fix the exhaust system if it needs anything or if it's rusty 'cause if it leaks carbon monoxide you could kill yourself and be unable to drive.
Bob: You also couldn't drive if your heater didn't work and you froze to death or if your defroster didn't work and your windshield iced up and you couldn't see out. So make sure they work too, eh?
Doug: And if your brakes don't work you can't stop the car and that's like riding an out-of-control snowmobile. No fun. You could hit a tree or a moose or something. So check the brakes and replace the linings if they look thin or if they squeal. You need your brakes a lot more during the Great White-Out.
Bob: You could get a tune-up too. That'll make the car run smoother and it won't use so much gas. My hosehead brother never gets his van tuned up and it runs lousy.
Doug: Take off. I had it tuned just two years ago.
Bob: That's too long. You should do it, like, every year.
Doug: Well, how about you? When was the last time you changed the oil in that car of yours?
Bob: Last spring, I think. Or the September before that.
Doug: Okay. So, like, don't talk to me about workin' on cars. You gotta put in a lightweight oil for winter, or a multi-grade like 10W-40. Otherwise the oil gets thick and runs like molasses and gunks up the engine. Then it won't start. We got an oil chart here somewhere for the read-

continued

"For winter you gotta change to a thinner oil or a multi-grade. If you don't you might not get the car started."

DRIVER

THE
TRAFFIC SAFETY MAGAZINE
FOR THE MILITARY DRIVER

DEPARTMENT OF THE AIR FORCE
HQ AIR FORCE INSPECTION AND SAFETY CENTER
Norton Air Force Base, California 92409

Hon VERNE ORR
Secretary of the Air Force

Lt Gen HOWARD W. LEAF
The Inspector General, USAF

Maj Gen GERALD D. LARSON
Commander
Air Force Inspection and Safety Center

Brig Gen GORDON E. WILLIAMS
Director
Aerospace Safety

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Dr. FRANCIS S. McGLADE
Director of Safety
United States Army

RADM T.C. STEELE, Jr.
Commander
Naval Safety Center

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VOLUME 16 NUMBER 5

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COL. WARREN L. BUSCH Chief, Safety Education Division		VIRGINIA HENDRIX Editor	
TSgt RON LATHROP Technical Editor	JERI ROOD Feature Editor	DON KELLEHER Art Director	LORRAINE HAMBLEN Staff Artist

ers. The colder it gets, the lower weight oil you have to put in the car. And change the oil filter at the same time.

Bob: Last winter you couldn't even get your van started. The battery wouldn't turn the engine over 'cause it was dead.

Doug: It was just a little low on water.

Bob: Yeah, you had to put in two gallons and have it charged and then it

"These little hosers shouldn't be playing in the street, but you'll find 'em there anyway, so watch out. Slow down, eh?"

still didn't work the next morning and you had to, like, buy a new one. You've gotta take care of batteries. But sometimes when it gets real cold an old battery will go bad. So then, even if you're not a hoser like my dumb brother, you'll have to get a new one.

Doug: Take off, eh? You're the one who just puts water in his radiator. You gotta put some coolant in too for winter.

Bob: You mean anti-freeze, hosehead.

Doug: Coolant *is* anti-freeze. You gotta mix it with water like it says on the container and put it in the radiator if you don't want the whole engine to freeze. Your engine made a nice ice box for keeping back bacon in, but it wasn't so great for anything else. And check the radiator and all the lines for leaks. If there's any leaks, it won't matter what you put in, 'cause it'll all run out, so get the leaks fixed, eh? And if the coolant's been in the radiator for too long, it won't keep the inside from rusting, so put some new stuff in if yours is old.

Bob: You always forget to check the fluid levels in the engine — the automatic transmission fluid and the brake fluid and that kind of stuff. And you know why you can't see out? You never check the windshield washer liquid, and it's always empty. That's why your car looks like you fingerpainted on the windshield. And do you ever replace the rubber blades on the wipers?

Doug: What rubber blades?

Bob: It figures. Hey, you readers, don't be like the hoser here. Change those rubber blades at the end of the summer when they're worn out from the heat, 'cause you'll be using them all winter. Old ones will just smear the dirt around and you gotta be able to see or you can't drive. Okay, so that's the vision part of the article. Another thing to do before the Great White-Out is lube the car.

Doug: What for?

Bob: Just wait until one of your wheels falls off like last winter and then ask "What for?"

Doug: Oh, make me look bad, eh?

Bob: That's not hard. Okay, so let's tell 'em about tires.

Doug: Yeah, like, you know why my hosehead brother has to buy new tires every six months? Because he never gets the front end of his car aligned and he always looks like he's making a turn when he's going straight and his tires wear out. So get the front end aligned, eh?

Bob: You didn't have to tell them that. You're always hosing me. Tell them about the snow tires.

Doug: You tell 'em. I'm gonna eat.

Bob: Okay, so while my brother overdoses on jelly donuts, here's the stuff on tires, eh? You gotta have snow tires for winter drivin', because they have more tread and you need the tread, like, for traction on snow and ice and slush and that kinda stuff. Tread gives you something to grip the road with instead of skidding around.

continued

continued

"See what happens when you don't control a skid, eh? You can end up clear off the road."

Doug: What do you know about tread, with those bald tires of yours?

Bob: Take off, eh? Put the snow tires on the drive wheels. Like, if you've got rear-wheel-drive, put 'em on the back and if you've got front-wheel-drive, put 'em on the front. Don't put radial snow tires on your car if you have bias-ply regular tires. Make sure all four tires are radials or all four are bias-plies. If you mix 'em up, the car will handle kinda strange.

Doug: Your car *looks* kinda strange. Your tires are all kinda squishy-looking.

Bob: That's the way radials look. The sidewalls flex more than regular bias-plies.

Doug: Yours *are* bias-plies. You've been running them low on air, haven't you?

Bob: I wondered why they wore out so fast.

Doug: Okay, so don't be like my dumb hosehead brother here. Read the sidewall of the tires and air them up to what it says. If you let air out of the tires for more traction, your tires will wear out faster and you won't get any more traction. And remember tires lose about one pound per square inch of pressure for every 10 degrees the temperature goes down.

Bob: If you don't live so far north as we do, you can maybe use some of the "all-season" tires that some companies make. It depends on how much snow and ice you get. If you don't get a lot, the all-season tires will work pretty good.

Doug: If you get a lot of snow like we do up North, you should maybe think about some studded tires. There are metal-studded tires and some with what they call "soft studs." Studs give some extra traction, but the metal ones tear up the roads, so they're illegal some places. We've got a stud chart here for you, which shows where they're legal including the provinces back home.

Bob: Okay, so that's tires. If you want really good traction, use tire chains. I'm an expert on tire chains. We use tire chains all the time, 'cause we get eight feet of snow every week.

Doug: You're always exaggerating.

Bob: Okay, we get eight feet of snow every two weeks. Tire chains will give you the best traction you can get on ice and snow, and they'll help you stop faster too. You should put tire chains on the drive wheels, just like I said about the snow tires. The American Automobile Association says you should put them on all four wheels if you have a front-wheel-drive car. Best thing is to ask the car's manufacturer.

"This guy didn't brush off his car and he'll leave a cloud of snow behind every time he leaves a stoplight. And he didn't clean off all the windows. Dumb, eh?"

Doug: But they're kind of a mess to put on, eh?

Bob: No, just follow the directions that come with the chains. They're not that hard to use. Drive slow when you've got chains on, 25 or 30 mph, tops. Okay, so that's the chains part of our article. What's all that junk in the back or your van, eh?

Doug: Take off, eh. That's important junk, hosehead. I had to take out all your stale donuts and empty sacks to make room for it. I've got a spare tire, like, with air in it, and a jack with a lug wrench. And the chains and the jumper cables if my battery goes bad again.

Bob: You need more than that. You need some flares or warning reflectors for when your van breaks down, which it does a lot. And you need some tools for getting it going again, like wrenches and screwdrivers and wire and tape for making temporary repairs. And some things you might have to change on the road, like a spare fanbelt, some fuses and bulbs and some wiper blades. And some oil and coolant and all those other fluids including the windshield washer stuff.

Doug: But don't put any gasoline in the trunk, just in the gas tank. Gasoline could explode in the trunk, so just put in an empty gas can in case you run out and have to go get some. That makes me think of fire, so have a fire extinguisher *inside* the car where you can get it quick. Okay, so that's tools and stuff. For winter you need the ice scraper and brush to get snow off the car, and you need a folding shovel to dig it out if there's eight feet of snow, like my brother says.

Bob: Or you could get stuck in a snowbank and have to dig out. If you do, you need something to give you some traction so you can move the car. Get some sand or salt or kitty litter.

continued

"Here's the right way to handle a skid. If the rear end of the car skids to the right, like this, turn the wheels to the right until it starts to straighten out. If it skids to the left, steer to the left. Beauty, eh?"

OILS FOR THE GREAT WHITE-OUT

Lowest Atmospheric Temperature Expected	Single Viscosity Oils	Multi-Viscosity Oils
32° F	20, 20W	10W-30, 10W-40
0° F	20W	10W-30, 10W-40
Below 0° F	5W*	5W-20, 5W-30

*SAE 5W single-viscosity oils should not be used for sustained high-speed driving (above 55 mph).

"You need to, like, have one of these ice scraper/brush things to clean the snow off the car and some good wiper blades to keep the windshield clear, eh?"

continued

Doug: Kitty litter? That's really strange, eh?

Bob: No, it works just as good as that other stuff and it's easier to clean up and it doesn't eat metal like salt does. Okay, so have a blanket and a first aid kit in the car too in case you get cold or cut a finger trying to get out of eight feet of snow. And a tow rope or chain so somebody can pull you out of the snow if you can't get out yourself.

Doug: Okay so then you need three dozen donuts too, and a couple pounds of back bacon, eh?

Bob: Right. So that's the preparation part of our article on driving in the Great White-Out. The driving part itself isn't that hard.

Doug: If it isn't that hard, why can't you do it? Hey, I'll tell 'em about driving in winter. First of all, cars don't run when they're frozen, so keep the car as warm as you can. Keep it in the garage or under the car port. If you don't have one of those, use a car cover to keep some of the cold out. At least use a tarp to cover the windows so you can clean the car off easier in the morning. If you're dumb, like hosehead here, you park in dumb places and the snow removal equipment piles snow on your car and you can't find it later. So be careful where you park, eh?

Bob: You're always hosin' me.

Doug: In the morning you have to shovel out the driveway and around the car. Then clean all the snow off the car so it doesn't blow off when you're driving. Clean off the lights in front and back so people can see you.

"Here's why you can't take off fast from a stop sign, 'cause the tires can't get a grip on ice. You have to go real slow at first and never move too fast or you'll slide around."

(below)
"There are directions with the tire chains so you can put them on without jacking the car up, but maybe this guy lost his."
(USAF photo by A1C Tim Wyatt)

And clean all the ice and snow around the exhaust pipe so the fumes don't get backed up into the car. Since the carbon monoxide in the exhaust is so dangerous, drive with a window open about a quarter of an inch for fresh air.

Bob: Before you scrape off the car, get inside and start it up so the defroster can help melt the ice on the windows, if there's any. Use that ice scraper/brush thing to scrape all the windows off. Don't leave any ice on the windows or the ice may stop you from seeing something you need to see.

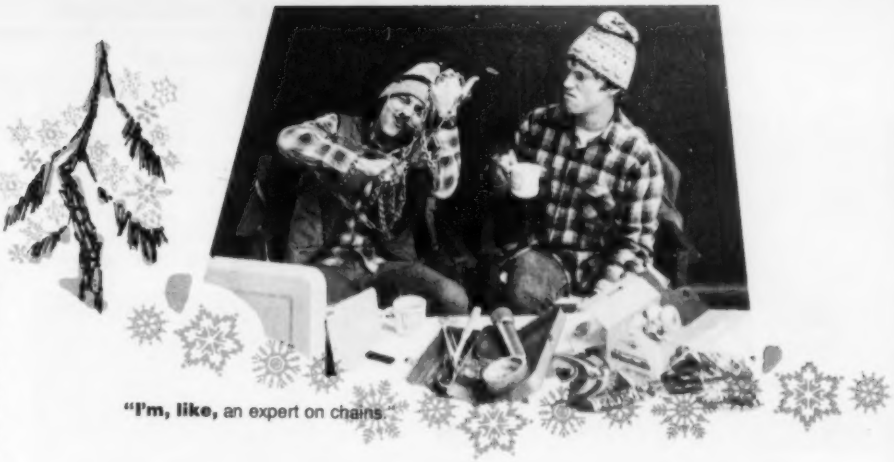
Doug: I was tellin' this part.

Bob: You were leavin' out the ice-scraping part. Don't leave nothin' out or they'll think you're dumb.

STUDDED TIRE

UNITED STATES

Alabama — Rubber Studs permitted.
Alaska — Sept. 15 — May 1
Arizona — Oct. 1 — May 1
Arkansas — Nov. 15 — Apr. 15
California — Nov. 1 — Apr. 1
Colorado — No restrictions
Connecticut — Nov. 15 — Apr. 1
Delaware — Oct. 15 — Apr. 15
District of Columbia — Oct. 15 — Apr. 15
Florida — Rubber or plastic studs permitted
Georgia — No restrictions
Hawaii — Prohibited
Idaho — Oct. 1 — Apr. 15
Illinois — Prohibited
Indiana — Oct. 1 — May 1
Iowa — Nov. 1 — Apr. 1
Kansas — Nov. 1 — Apr. 15
Kentucky — No restrictions
Louisiana — Prohibited
Maine — Oct. 2 — Apr. 30
Maryland — Prohibited, except in 4 western counties Nov. 1 — Apr. 1
Massachusetts — Nov. 2 — Apr. 30
Michigan — Only "soft studs" permitted Nov. 15 — Apr. 15; in upper peninsula and northern lower peninsula Oct. 1 — May 1
Minnesota — Prohibited, but use is permitted by temporary non-residents on a reciprocal basis
Mississippi — Prohibited
Missouri — Nov. 1 — March 31
Montana — Oct. 1 — May 31
Nebraska — Prohibited except for license plates carrying the wheelchair symbol
Nevada — Oct. 1 — Apr. 30
New Hampshire — No restrictions
New Jersey — Nov. 15 — Apr. 1
New Mexico — Permitted only in conditions that are likely to cause a vehicle to skid
New York — Oct. 16 — Apr. 30
North Carolina — No restrictions



"I'm, like, an expert on chains."

Doug: Okay, so after the car is cleaned off you get inside and you can go. But go slow, eh? Start out slow and don't spin the wheels. If you spin 'em you won't get anywhere. You'll just dig yourself in deeper or make the ice slicker. Give the car just a little gas and then give it a little more after you start to move. Like, don't get impatient, eh? Don't go too fast 'cause you can't turn or stop too easy on ice and snow. If the speed limit says 30, go slower 'cause the speed limit on the signs is for dry roads, not slick ones.

Bob: Yeah, keep the speed down and give all the hosers on the road a lot of room. A lot of them can't drive any better than my brother. Think ahead about anything you're gonna do, like stop at a light or make a turn into the donut shop parking lot. And then slow down long before you get there. If the hosers want to drive fast, let them go around you and then you can watch them slide around.

Doug: The slick roads are the biggest problem during the Great White-Out.

continued

"Like, this guy'll have to dig his way out when he leaves work. I hope he has a shovel."
(USAF photo by A1C Tim Wyatt)

"This is fog, and it can get pretty bad sometimes, like, when you can't see farther than the hood."

RESTRICTIONS

North Dakota — Oct. 15 — Apr. 15
Ohio — Nov. 1 — Apr. 15
Oklahoma — Nov. 1 — Apr. 1
Oregon — Nov. 1 — Apr. 30
Pennsylvania — Nov. 1 — Apr. 1
Rhode Island — Nov. 15 — Apr. 1
South Carolina — Permitted if the studs do not project more than one-sixteenth of an inch when compressed
South Dakota — Oct. 15 — Apr. 15
Tennesse — No restrictions
Texas — Permitted only if the studs will not damage the highway
Utah — Only "soft studs" permitted Oct. 15 — Mar. 31
Vermont — No restrictions
Virginia — Oct. 15 — Apr. 15
Washington — Nov. 1 — Apr. 1
West Virginia — Nov. 1 — Apr. 15
Wisconsin — Prohibited, except for out-of-state registered vehicles passing through state, 30 days maximum
Wyoming — No restrictions

CANADA

Alberta — No restrictions
British Columbia — Oct. 1 — Apr. 30
Manitoba — Oct. 1 — Apr. 30
New Brunswick — Oct. 16 — Apr. 30
Newfoundland — Nov. 1 — Apr. 30
Northwest Territories — No restrictions
Nova Scotia — Oct. 15 — Apr. 30
Ontario — Prohibited
Prince Edward Island — Oct. 1 — May 31
Quebec — Permitted Oct. 15 — May 1 for vehicles weighing less than 2250 kg
Saskatchewan — No restrictions
Yukon — No restrictions

(Note: These dates are taken from a release from the American Automobile Association and are current as of last winter. Check with local authorities to be sure.)

continued

"Like, if you follow this close you might run into the guy ahead if he stops quick or skids around. My hosehead brother was drivin', not me."

There's ice everywhere. Funny thing is, ice is slickest at about freezing, 32 degrees. So be real careful when it's that temperature out, eh?

Bob: Ice is real sneaky, though. Sometimes you can't see it. Sometimes it hides under the snow and sometimes it hides in a shadow. They call that "black ice" and it's real dangerous 'cause you can be on it before you see it and skid off the road.

Doug: So if you see a shadow across the road, slow down before you get there. And don't make any quick turns or you'll go sledding. And when you have to turn, slow down before you start the turn. Don't put on the brakes or speed up during a turn 'cause that'll make you spin. Especially if your brakes don't apply evenly on both sides of the car — that's why you check 'em out before the snow starts.

Bob: If you get your brakes wet in a puddle, dry them out or they won't stop the car.

Doug: How? With a towel?

Bob: No, hosehead. Just drive a little way with one foot on the gas and the other on the brakes just enough to get some friction that'll dry them out.

Doug: When you have to stop for the lights or anything, lift your foot off the gas early and let the car slow down. When you use the brakes, pump 'em.

Bob: What's that mean?

Doug: That means push down on the brake pedal, let off and then push down on it again as many times as you need to. It keeps the wheels from lockin' up. If you lock up the wheels you can't steer and the car will skid. Then you're back to ridin' an out-of-control snowmobile.

Bob: If you're skidding that means you were going too fast, so *slow down*, eh?

Doug: First they gotta stop skidding, hosehead. Skids are exciting, but you end up hitting something like a telephone pole or a car, so they're not real fun. What happens is, the rear end of the car doesn't want to go where the front wheels are pointed. So here's what you do: first, take your foot off the gas real easy. If the rear goes around to the left, turn the front wheels to the left until the car starts to straighten out. If it goes to the right, steer to the right. They call that "steering into the skid." Don't steer too far or the car will skid the other way. If that happens, just keep steering into each skid until you get straightened out. Don't use the brakes unless you have to and then just pump 'em.

Bob: Hey, that's pretty good. Where'd you learn that?

Doug: I read it in DRIVER Magazine. If the car has a front-wheel-drive, the Saab people say to steer into the skid while you push in the clutch pedal on a manual transmission or take your foot off the gas on an automatic.

Bob: Okay, so that's skidding. So what happens if you lose it and get stuck in eight feet of snow?

Doug: You sit back with some donuts and wait for spring.

Bob: Not unless you want to freeze to death or even get frostbite. No, you gotta get out of the snow and back on the road.

Doug: I was kidding, hosehead.

Bob: First thing if you get stuck is to go slow. Whether you're stuck by the side of the road or just in some deep snow on the road, just give the car a little gas to move it. Keep the front wheels pointed straight if you can. If they're turned, you'll just slide some more and get stuck worse. Try rocking the car. That's where you go forward a little and then go backward a little until you can move one direction or the other.

Doug: What if that doesn't work?

Bob: Then you have to dig around the wheels with your shovel to give them an easy incline out of the snow. And maybe use some of the sand or kitty litter to give the tires some traction.

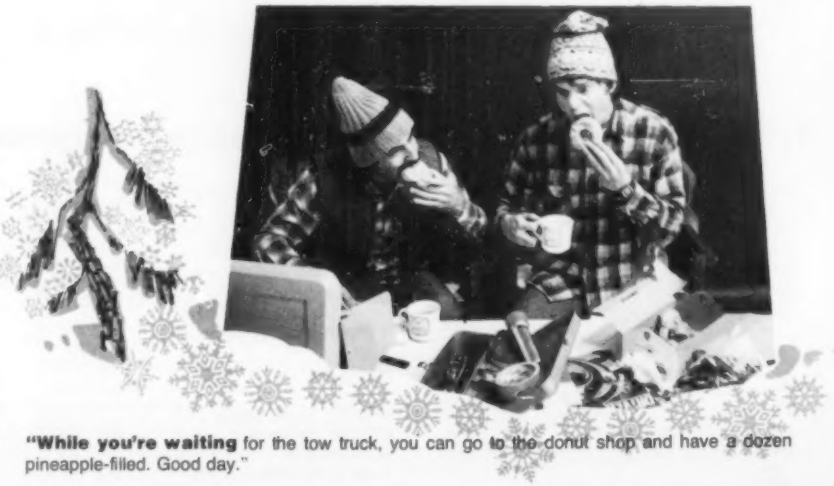
Doug: What if that doesn't work?

Bob: Then you go to a phone and call the tow truck. If you stay in the car to wait, don't run the engine all the time 'cause the exhaust could kill you. If there's one close, you can hide out at the donut shop and eat a dozen or so crullers. Like these.

Doug: Beauty. Hey, I want a pineapple-filled. Where's my coffee, eh?

Bob: Here it is, triple sugar and triple cream. Okay, so, like, that's our article. So, good day.

Doug: Good day.



"While you're waiting for the tow truck, you can go to the donut shop and have a dozen pineapple-filled. Good day."

Saved Times

Belts Save 374

More than 200 DRIVER Magazine readers have credited restraint systems with saving 343 lives in accidents this year. In addition to the 203 "Make It Click" forms, Air Force traffic safety officials have also received 17 letters and two news releases testifying that belts saved 31 more lives.

The "Make It Click" forms first appeared in the May 1982 DRIVER Magazine 100 days before the report was issued.

According to the forms, 208 of those saved were in the critical 18- to 30-year-old group. The number of saves in other age groups were: over 60 years, three; 45-60 years, 15; 30-45 years, 54; 12-18 years, 22; four to 12 years, 21; nine months to four years, 16; and one day to nine months, four.

According to the letters received five of the 26 people saved by belts were young children.

Automatic belts were used in only six accidents according to those filling out forms.

Unfortunately 39 forms and 39 letters accounting for 106 lives saved by belts were not included in the report totals because they represented accidents that happened before 1982.

Most of the letter writers had been misled by an article that appeared in *Air Force Times*. On the other hand, those people filling out forms ignored the line that said: "Must have occurred in 1982."

One individual sent in a form admitting that he was not wearing a belt. Similarly, four motorcyclists sent in forms, one of whom said that he was drunk at the time of his accident.

Head-on Crash

Colonel Thomas M. Butler of Brooks AFB, Texas, his wife, their daughter and cousin were in this 1979 Jaguar XJ6 when a 1979 Buick station wagon hit it almost head-on. Because the colonel and his wife were wearing combination seat belts and shoulder harnesses, they were not seriously hurt. The back seat passengers were not wearing seat belts and did not come through the accident as well.

continued

Run on T-Shirts

Because of the unprecedented demand for "Make It Click" T-shirts supplies were depleted early in the campaign. However, as soon as a new shipment of the shirts is received, they will be mailed out.

Sports Cars' Restraints Do Their Job Well

Because of their small size most sports cars come out second best in accidents. Nevertheless, sporty-car occupants increase their chances of survival by "Making It Click."

For example, in a recent "grinding" head-on collision the only survivor was in the sporty car wearing her seat belt.

In another accident, a sports car driver crested a small hill and saw four cows on the road less than 20 feet ahead. He ran off the road on the right, lost control on the grass and totalled the car against a tree. Safety belts limited his injuries to a bruised elbow and leg although flying windshield glass cut his eyelid.

Similarly, a different driver lost control of the same type of sports car, over-corrected and struck some trees that overturned the vehicle. Even though the car came to rest on its top, the driver was uninjured.

In a different vein, a farm tractor hauling a trailer full of hay without lights or warning devices pulled out in front of a sports car at 11 one night recently. The car rolled twice following the unavoidable crash, but seat belts saved the driver from injury.

The common remark by sports car drivers after accidents has been, "seat belts work."

Acrobatics

After a double flip this driver's only injury was a small cut over his left eye. Body repairs to the vehicle, however, ended up running more than $7,200.

Double Flip Follows Emergency Stop

SSgt. Walter Obrecht glanced at his speedometer, confirming his speed at 55 mph. As his eyes re-focused on the road ahead, they were met by the red flashing brake lights of the cars directly in front of him.

"I had plenty of stopping distance," recalls the 23-year-old Colorado Air National Guardsman. When his foot came down on the brake pedal however, his 1981 Toyota Land Cruiser went into an uncontrolled skid instead of a smooth stop.

The four-wheel-drive vehicle slipped left across the road, then right before he regained control. Obrecht steered toward the left shoulder to avoid rear-ending the cars ahead, thinking to come to a stop in the median. As his left front wheel came off the asphalt however, it sank in the soft dirt on the shoulder, causing his four-wheeler to flip — twice — finally coming to rest on the driver's side.

He unbuckled his shoulder/lap restraint, pushed open the passenger-side door and climbed out. Ironically, his emergency stop and accident were the result of yet another mishap less than a mile up the highway. The occupants of that car however, weren't so fortunate. The driver was seriously injured and his passenger killed. Police reports indicate neither was wearing seatbelts.

Belts Help On and Off Road

Including seat belts in the macho image that goes with utility vehicles prevented serious injuries for several DRIVER Magazine readers according to "Make It Click" forms.

"While four-wheeling down a mountainside," drawled one reader, "I came to a sharp corner. The mountain rose up immediately after the corner! There was no time to slow so I headed into the brush. Brush that was not so conveniently hiding a boulder.

"If we hadn't been wearing seat belts," he concluded, "it would have been 'windshield city.' "

That was an off-road accident. In an on-road accident a couple and their two young children were riding in an oversized cab pickup truck late one night when it hit and killed a horse. The horse did $4,000-worth of damage to the truck, but belts kept injuries to the driver and passengers to a minimum.

Then there's always the classic pickup truck accident where the driver loses control, goes into a ditch and rolls the vehicle. The truck may roll once, twice, three times or more, but when belts are worn, readers report few if any injuries.

Of course, ice, snow, rain or other weather conditions can contribute to these type accidents, but belt wearers always report how glad they were they "made it click" before the accident.

One Jeep driver reported being hit by a car that had run a stop sign. The impact turned the Jeep sideways, then sent it rolling down an embankment.

"Both vehicles were totalled," the Jeep driver noted. "Of the four people in the other vehicle, two were seriously injured. I received only minor cuts and bruises. Seat belts saved me."

Belts Work on Duty, Too

Of course, the safety restraint systems provided in government vehicles save lives, too.

In January a Navy Recruiting sedan was struck by a civilian vehicle in an intersection. Three passengers in the civilian car weren't wearing belts and were hospitalized with serious injuries. The Navy driver was wearing his belt and wasn't injured.

Across the ocean in the Philippines a military M151 jeep lost its brakes going down a hill. The vehicle finally stopped in a small creek, but the driver was OK because of belts.

On an interstate highway in Idaho a 1½-ton cargo truck went out of control. The truck left the road and rolled twice before landing upright in a ditch. The driver says seatbelts saved his life.

The driver of the six-pack pictured here says:

"Suddenly I saw bushes hitting the front of the vehicle and the road shoulder seemed to be tearing the truck apart.

"I attempted to return to the roadway when suddenly the truck veered into the left lane and I saw lights approaching. I veered to the left shoulder to avoid the oncoming vehicle and lost control as the truck started to roll.

"When the vehicle came to a rest, I was upside down. My seat belt was still buckled and I was terrified, but alive."

"Making It Click" works just as well on duty as off.

First Not Last **The airman** first class who was driving this 1976 Dodge six-passenger pick-up truck survived his first accident which he says might have been his last had he not "Made It Click."

Weather

Road conditions were wet, the air was misty, and fog was setting in as Felicia Copeland headed toward her Highland, Ill., home from her job as secretary in the Air Force Communications Command's Inspector General office at Scott AFB. "I noticed two cars coming at me in the opposite lane," Copeland relates, "The next thing I knew, one car was coming across the raised median, airborne, four wheels off the pavement, and it hit me head-on." Her car was demolished but Copeland was able to walk away from the accident, a fact she attributes to having taken a couple of extra seconds to fasten her safety belt.

continued

BELTS WORK IN ALL SIZES OF VEHICLES

Safety belts prevented serious injuries for 374 readers and their friends in accidents during early 1982. Look through these classifications of accidents by type and size of vehicle and see for yourself.

★ Sedans

Large

Ice on bridge in freezing rain caused skid into side railing that removed driver's door.

Run off road by another car, went into ditch and rolled twice.

Broadsided truck that pulled out in front of me. Car totaled.

Fell asleep at 50 mph and crashed into a telephone pole. Car totaled.

Right brake grabbed, car glanced off another car and then plowed into yet another. Damages: $4,000.

Lost control avoiding a horse, went over embankment, rolled over two or three times and struck a tree.

Mid-Size

Had just gotten into our parked car when we were rear-ended by a drunk doing 60 mph and knocked us into a telephone pole.

Skidded on ice and snow at 55 mph, went into ditch, rolled over on top, slid across four lanes of oncoming traffic coming to rest on far shoulder.

Struck abandoned car causing my car to climb and then flip on its side before it rolled on its top.

Rear-ended at 35 mph while attempting to merge. Driver's seat moved 4-inches forward.

Traveling slow in right lane of autostrada when a semi-trailer truck rear-ended us and knocked us into ditch. Car was totaled.

Lost control and rolled end-over-end down a steep embankment.

★ Sedans

Was doing 55 mph when rear-ended by a car approaching at high-speed. Car totaled.

Compact

Speeding teenager ran stop sign, hit wife's car, spun it around twice doing $8,000 damage.

Hit patch of ice, lost control, hit ditch, rolled 1½-times. Car total loss.

Slush sent rear-end into left guard-rail, then head-on into right guard-rail. Damage to car: $3200.

Stopped on freeway to fix flat tire when struck from behind by drunk driving 75 mph. Both cars totaled.

Vehicle rear-ended our boat trailer, boat went over top of our car, then vehicle rear-ended our car. We went off road, came back on and were hit again. Then another vehicle hit us. Skidded sideways on curve then struck a phone pole.

Crested a hill at 55 mph, another car was turning left and I hit him in the rear.

Turning left onto an expressway access ramp during a heavy rainstorm, I was struck by another vehicle doing 50 mph.

Was second car in a four-car chain reaction rear-ender while fully stopped. Over $4000 damages.

Hit a patch of ice making a right turn, car skidded out of control and ran off the road into a telephone pole.

Another driver (DWI) lost control, crossed centerline and struck me on driver's side pushing me up on snowbank.

Hit glare ice on overpass, spun around, hit guard rail and flipped onto top.

I had the flu, dozed off, drove off the road and hit embankment totaling my car.

★

★ Sedans

Another car ran a stop sign, hit it on the passenger side then spun off road. Continued to knock down road sign and impact concrete culvert head-on.

Hydroplaned on water, skidded out of control off road, impacting embankment and flipped end-for-end. Landed on wheels in snow and mud.

Tractor-trailer stopped ahead of the car in front of me, but I could not get stopped. Did $3000 worth of damages.

Started to hydroplane, lost control, ran off road and flipped twice.

Station wagon traveling 60-65 mph swerved to miss an illegal turning van, hit brakes and skidded 124 feet before hitting me, doing $7000 in damages.

Sub Compacts

Boat on trailer came unhooked from truck, swerved into my lane and hit me head-on. Damages: trailer, $1000; boat, $5000; my car, totaled.

Driver fell asleep, went over embankment, rolled over several times and hit a tree.

Hit slick wet spot, rolled twice, flipped once.

Slid through red light on snow.

Driver's side hit broadside at intersection.

Hit in intersection and pushed into telephone pole as my door flew open.

Rear-ended by pickup truck at traffic light, throwing me into intersection where I was hit by another auto.

Lost traction on interstate exit ramp, spun widely into curb. Rear axle torn from car.

Was in left turn lane when struck in rear by car doing 30 mph. My car was totaled.

Was waiting for light to change when a station wagon didn't bear right and plowed into my left side.

★

★ Sedans

Another car came around a curve on the wrong side of the road hitting me head-on. Cars totaled.

Struck in rear and run off road into a tree head-on.

Lost control on icy corner, slid into telephone pole, then down a creek bank into water.

Rear-ended car that stopped ahead of me.

Mini pickup crossed centerline and hit our car head-on. Both vehicles totaled out.

A small maneuver to avoid a pothole on an icy road and the car began to skid, hit curb and rolled.

Vehicle passing oncoming vehicle forced us off road. Car rolled over several times down a large bank into a gully.

I was pulling out of a parking space when a car going 25 mph up the wrong way in the parking lot broadsided me.

Truck pulled into my lane; I hit center island, bounced across into oncoming traffic where I hit a two-seater head-on.

Car passed us on right, slammed on brakes to make left turn. Impact at 30 mph.

I was running 40 mph while he hit me in rear doing 90-95 mph. I spun into ditch and turned over. Car was totaled.

Was stopped on a freeway when a fast-moving car failed to notice that traffic was stopped. He hit my rear, pushing me into a road divider.

Car in front of me stopped for a dog; I didn't.

Driver fell asleep, veered into guard-rail, rolled two times and slid on side about 100 feet.

Was too far to the right, hit guard-rail and flipped.

★

★ Sedans

Rear-ended at red traffic light with such force it bent frame and buckled roof. Car totaled.

I was in a hurry and didn't make a complete stop.

Hit a slick spot, broke free of road, swerved and rolled one complete revolution. Car totaled.

Passing a semi-truck at 28 mph in freezing rain on interstate when semi lost control, hit me, spinning me around where the following car hit me head-on and totaled this vehicle.

★ Wagons

Large

I failed to see car coming at 55 mph. Pulled out, was hit, spun around, hit again and landed in a ditch across road.

Mid-Size

Drunk driver hit me at excessive speed over a bridge. Wagon totaled.

Small

Heavy, wet snow pulled car into snow bank where it flipped onto roof.

★ Trucks

Standard Pickup

Forced off highway into ditch. When front fender struck embankment, driver's door flew open.

Lost control, hit a ditch, rolled over twice before stopping.

Took a very sharp turn and ran into a stone wall.

Drag-racing motorcycle collided with truck bed, destroying his bike and sending him into the back of the cab.

Pickup truck in left lane kept me from moving over and I hit a police car that had stopped at the side of the road.

Passing vehicle caused oncoming driver to panic, swerve into our lane and we crashed head-on.

Passenger restraint systems have been around for years. And for years people have been inventing reasons not to use them.

Twice during April 1982, Minot AFB, N.D., security police had checked the driver of this car. And twice she was found not wearing seat belts.

However, on June 16 she buckled herself in. She "Made It Click" for her five-year-old in the right front seat. And she put her two-year-old into a child seat.

Why? Because she didn't want to be caught at a random base gate check . . . again. Whatever the reason she had for "Making It Click" that day, she and her two children are alive today.

CHAINS

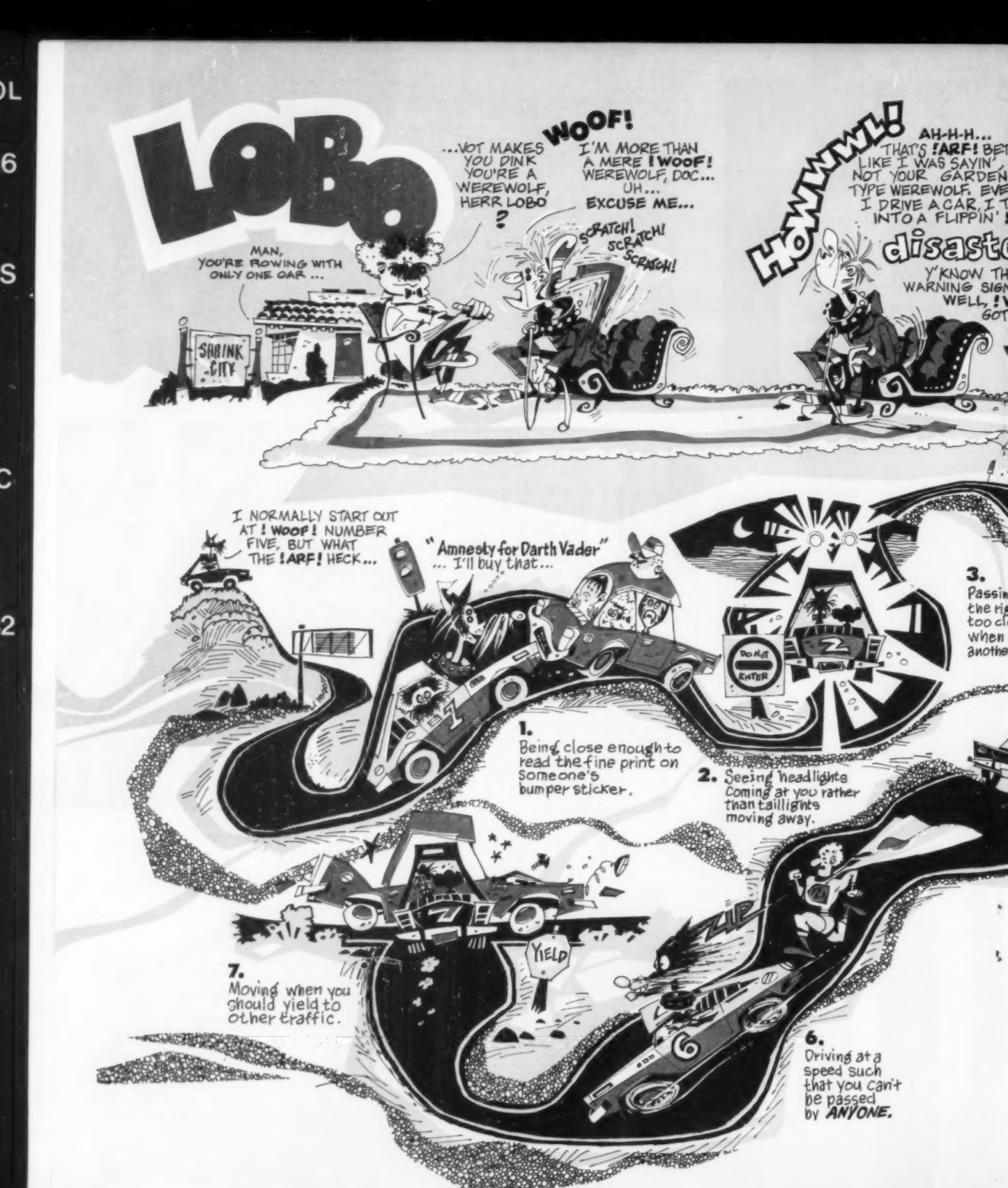
and the GREAT WHITE-OUT

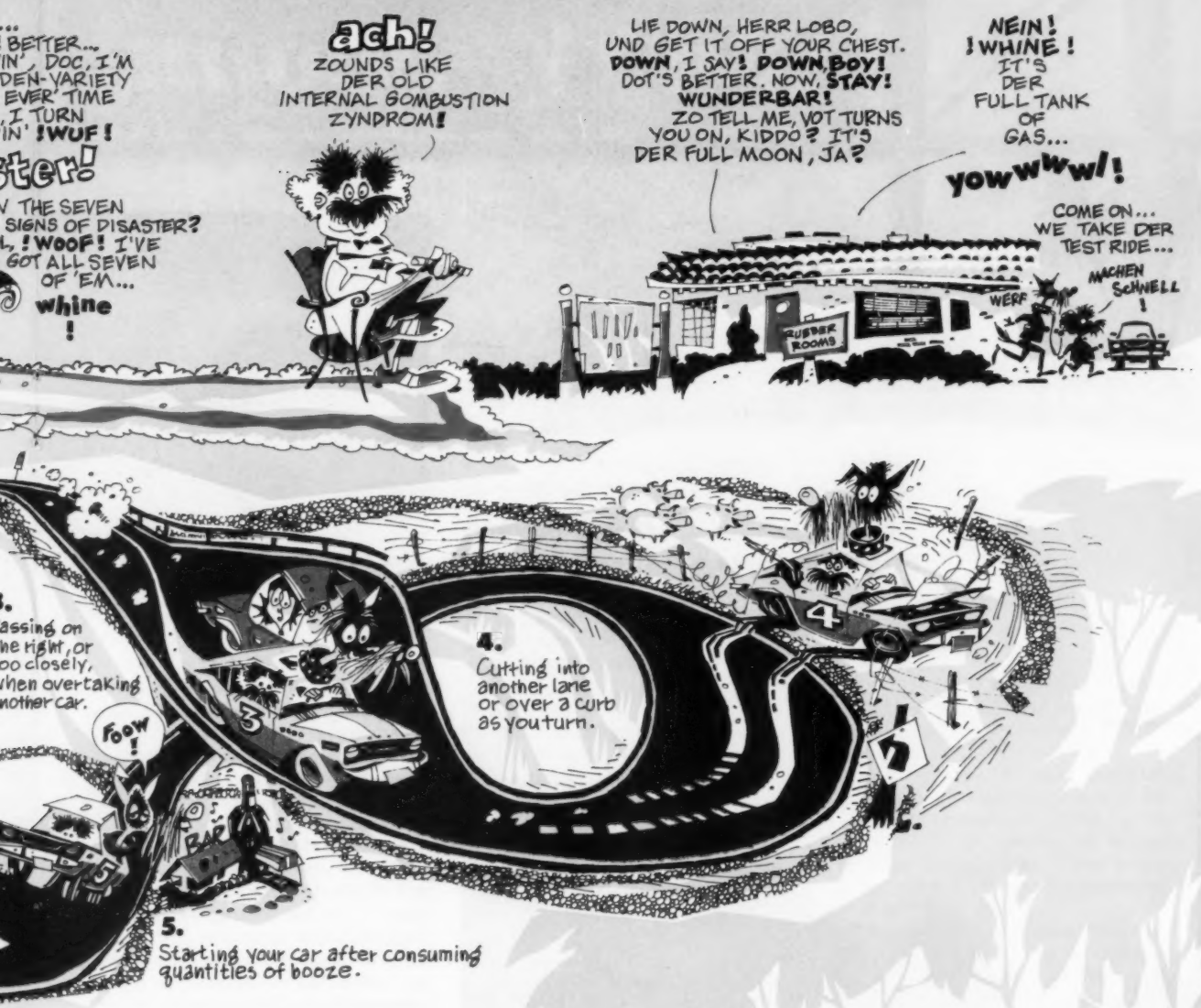
"This is Doug McFrenzie again. I'm, like, the good-looking one in the article on page 1. My hosehead brother Bob is out putting iodine on the cuts he got from the tire chains. He didn't tell you how to put the chains on your car, so here's how."

(top)
"First, untangle the chains and spread them out behind the drive wheels, the ones that power the car. If there are any cleats, put them facing up or you'll push them into the tire tread when you move the car. Attach the chains to the wheel with the chain applier, that spring steel wire thing Bob has attached to his head on page 7."

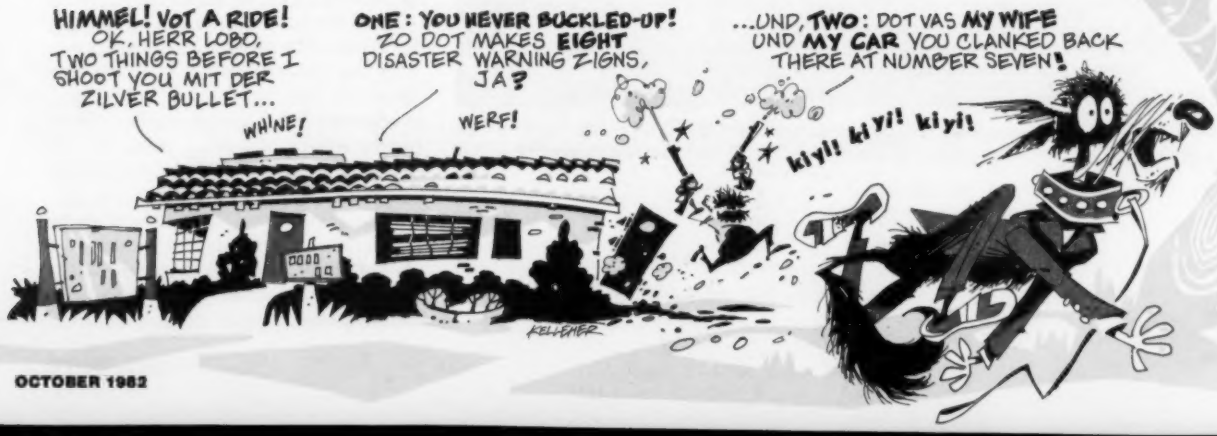
"Pull the chains up close to the wheel so they won't hook on the fenders when you move the car."

"Drive forward until the wheels go around one time. This will pull the chains around the tires and you won't have to jack up the car like the guy on page 6. Then fasten the hooks at the end of the chains, the one on the inside of the wheel first. Beauty. Now you won't slide around so much when there's eight feet of snow."


LOBO
MAN, YOU'RE ROWING WITH ONLY ONE OAR...
SHRINK CITY
...VOT MAKES YOU DINK YOU'RE A WEREWOLF, HERR LOBO ?
WOOF! I'M MORE THAN A MERE !WOOF! WEREWOLF, DOC... UH... EXCUSE ME...
SCRATCH! SCRATCH! SCRATCH!
HOWWWL!
AH-H-H... THAT'S !ARF! BE LIKE I WAS SAYIN', NOT YOUR GARDEN TYPE WEREWOLF. EVE I DRIVE A CAR, I T INTO A FLIPPIN'
disast
Y'KNOW TH WARNING SIGN WELL, ! GOT
I NORMALLY START OUT AT ! WOOF ! NUMBER FIVE, BUT WHAT THE !ARF! HECK...
"Amnesty for Darth Vader" ... I'll buy that...
DO NOT ENTER
3. Passi the ri too cl when anothe
1. Being close enough to read the fine print on someone's bumper sticker.
2. Seeing headlights coming at you rather than taillights moving away.
YIELD
7. Moving when you should yield to other traffic.
6. Driving at a speed such that you can't be passed by ANYONE.


...
BETTER...
'IN', DOC, I'M
DEN-VARIETY
EVER TIME
I TURN
'IN' !WUF!
ter!
V THE SEVEN
SIGNS OF DISASTER?
L, !WOOF! I'VE
GOT ALL SEVEN
OF 'EM...
whine
!
ach!
ZOUNDS LIKE
DER OLD
INTERNAL GOMBUSTION
ZYNDROM!
LIE DOWN, HERR LOBO,
UND GET IT OFF YOUR CHEST.
DOWN, I SAY! DOWN, BOY!
DOT'S BETTER. NOW, STAY!
WUNDERBAR!
ZO TELL ME, VOT TURNS
YOU ON, KIDDO? IT'S
DER FULL MOON, JA?
NEIN!
!WHINE!
IT'S
DER
FULL TANK
OF
GAS...
yowwwwl!
COME ON...
WE TAKE DER
TEST RIDE...
MACHEN
SCHNELL
!
WERF
RUBBER
ROOMS

assing on
he right, or
oo closely,
when overtaking
nother car.
FOOM
!
BAR
4.
Cutting into
another lane
or over a curb
as you turn.
5.
Starting your car after consuming
quantities of booze.


HIMMEL! VOT A RIDE!
OK, HERR LOBO,
TWO THINGS BEFORE I
SHOOT YOU MIT DER
ZILVER BULLET...
WHINE!
ONE: YOU NEVER BUCKLED-UP!
ZO DOT MAKES EIGHT
DISASTER WARNING ZIGNS,
JA?
WERF!
...UND, TWO: DOT VAS MY WIFE
UND MY CAR YOU CLANKED BACK
THERE AT NUMBER SEVEN!
kiyi! kiyi! kiyi!
KELLEHER

If you haven't driven in some time, you may be a little rusty.

After a tour at an overseas base, will your driving habits carry over to affect how you drive in the States? When this member returns from England, everything will seem backwards to him for a while.

You never forget how to ride a bike. That rule could also apply to driving a car. However, if you're away from your car for a while you could feel ill-at-ease when you drive again.

You might have experienced this at times, like after a TDY in which you don't drive at all or else drive another car. When you get in your own car again, you feel strange for a short time. Maybe you feel too close to the controls or too far away. Maybe you are distracted by the position of the mirrors in your field of vision. Maybe the layout of the dials on the dashboard catches your attention. Anything could cause a momentary feeling of unfamiliarity — the amount of power (or lack of it) in the car, the size of the steering wheel, anything.

What's the result? You might control the car incorrectly, steering too hard or too lightly, or you might brake too hard, or any one of many other things. Usually, these things are minor, and they disappear rapidly as you get the feel of your car again.

But those are just the minor problems of a short period of no driving. What about a much longer time without a car? A sailor at sea will sometimes go for months without driving.

Back, Y'all!

An airman stationed at some overseas area might not drive for a long time, or he might drive only flightline vehicles. A soldier abroad might drive only a limited amount on roads without any high speed travel. Any of a number of situations could alter your driving habits from what they are in the States. Then, when you return you might find yourself unfamiliar with both your car and with the kind of driving you have to do.

The lack of high speed driving is a very important example. When one of our staff returned to Southern California after a motoring vacation of two weeks, he found himself in the middle of hundreds of cars traveling 15 mph faster than he was driving. Although he had been driving for the entire two weeks in his own car, the sudden increase in traffic speed rattled him for a time.

So it was simply the high speed that caused his problem. But compare him to a service member who has been on a remote tour for a year with no chance to drive fast. How much more uncomfortable would that member feel?

On the other hand, a change from high speed to lower speed driving might also disorient the driver. Another member of our staff was test-driving cars at high speeds for several days. When he returned home he felt that any speed, even highway speed, was too slow. He had to watch his speed to avoid getting a ticket.

Could such unfamiliar feelings, especially after a long period without driving, lead to an accident? Certainly a driver who was frightened by the number of cars around him or their speed might be freaked into making a mistake. And someone who had to think so much about what he was doing that he couldn't give full attention to traffic could also make a mistake. It's a bit like learning to drive for the first time; there's a lot to pay attention to.

You have to get your "land legs" after a long time at sea. You also have to get acquainted with driving again after a long time without a wheel in your hands.

What's the best way to do this? The same way you learned to drive in the first place. By taking it slowly and getting the feel of the car before you face a lot of traffic. For example, it's a bad idea to jump on a freeway at rush hour before you know the positions of all the controls in the car.

Obviously, you're not a new driver. You've been driving for years. But that period without a car may have left you a little rusty.

Get in the car and remind yourself where the switches and controls are. Adjust the seat and mirror to your liking and fasten the seatbelt.

Drive around the local neighborhood, getting used to the feel of the car, its acceleration and braking, its steering and the visibility all around from the driver's seat. It won't take long. After all, you're *re*acquainting yourself to the car.

Drive around in sparse traffic on the side roads until you are familiar with the car again and you feel confident and your movements are smooth and automatic. Then you can tackle the heavier traffic in the city, the freeways and the shopping centers.

When you meet up with the heavier traffic, be constantly on the alert. It will take you a little while to get used to the great number of cars again and the high speeds. During this time anything could happen to surprise you.

Even after you get used to all of it again, you should still exercise caution. Surprises and emergencies happen all the time, to new drivers and experienced ones.

You might never forget how to drive a car, but you never know everything either.

inch bugs BECOME fireballs

Gasoline prices have started going up — again. As a result many motorists are trying to stretch the last inch out of every tank of fuel. And in getting those extra inches — so they can get to a station that has unleaded for a penny less a liter — some drivers are running out of gas.

As if this wasn't enough trouble, some of the inch bugs are turning running out of gas into tragedy. In attempting to restart the dry car they pour raw fuel straight into the carburetor. A backfire spits burning gasoline out of the carb, setting both the car and luckless driver ablaze.

Of course the best way to avoid becoming a human fireball is to not run out of gasoline in the first place. However, if you do run out of fuel, do NOT pour gas directly into the carburetor!

The starting time difference gained by putting gas straight into the carburetor is meaningless in the face of the fire risks. Let the fuel pump properly deliver the gasoline you've dumped into the tank.

CHILD RESTRAINT UPDATE

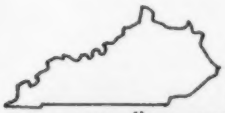
So far this year seven states have enacted mandatory child restraint laws while three other states have passed other legislation dealing with child in-car safety.

The states enacting mandatory child restraint laws are:

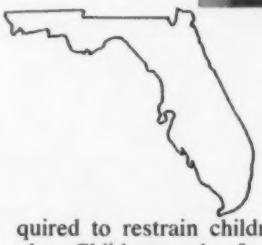
Alabama — Drivers must require children under age three to use child restraints.

Delaware — Drivers must require children under age four to use child restraints.

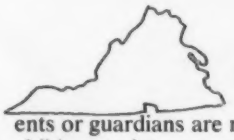
Connecticut — Drivers must require children to be restrained. Children under age four seated in the front seat must use a child restraint system. Children ages one to four in back seats must use either a child restraint or seat belt.



Kentucky — Resident parents or guardians must restrain children under 40 inches tall in child restraints while transporting them in motor vehicles.



Florida — Parents or guardians are required to restrain children in vehicles. Children under four years old must be in a child restraint. Those ages four and five must be in either a child restraint or seat belt.



Virginia — Resident parents or guardians are required to use child restraint systems for children under age four while transporting them in vehicles manufactured after Jan. 1, 1968. Seat belts may be used if the child weighs more than 40 pounds.

Wisconsin — Residents are to require children under age two to use a child restraint system.

In addition, **Nebraska** now requires licensed day-care centers to properly restrain children while transporting them. Meanwhile, **New York** amended its mandatory child restraint law to allow children ages four and five to use seat belts or child restraints.

Finally, **Hawaii** will grant a $25 state income tax credit for the purchase of a child restraint system.

Buying an AWESOME Used Four-Wheel-Drive

Last month you looked at the mechanical responses, body and undercarriage. Now it's time to fire it up and work it out.

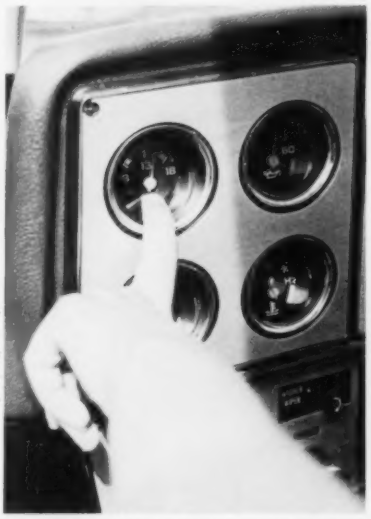
"Four-wheel-drives are like a really good part of the scene; so OK.

"Unhuh. So like, I don't know. I'm like freakin' out — totally.

"So I like answer this classified ad you know. And I like want to test drive this used 4x4. And then I like see it. Oh migod, it was like so grody. It was like really embarrassing. I am like sure. I go like 'Ah, I don't think I can handle this, you know.' I was like really embarrassed.

"It's just like — like I don't know. Like, how can I buy the neatest used four-wheeler and stuff? Like it's going to be like so so cool, you know. Like so awesome."

Does the engine fire right away when you start it, or do you have to crank it for a while? Are there any unusual noises when it is cranking? Are there any while the engine is idling? Is the idle smooth and easy?



Do all the engine gauges work? Are any flickering? Do all the controls work to their extremes?

In the September DRIVER we helped you look at the body, interior, engine compartment and undercarriage of used four-wheel-drive vehicles. We also recommended taking the vehicle to an independent test center for a complete examination. Now it's time for the test drive — after all, this is where you'll live with your purchase, so let's get to it and find out if the vehicle will be what you want.

As with the September article, you'll find that many of our suggestions are questions that you should ask yourself. You either get the right answers or start looking elsewhere for your awesome four-wheel-drive.

continued

With the headlights on, raise and lower the engine rpm. Do the lights respond by getting brighter and then dimmer? What's the electrical gauge have to say about this pattern?

Hit the brakes hard! Is the pedal firm? Keep the pressure on and hope that the pedal doesn't slowly sink!

Does the engine miss, ping, knock, detonate or rattle while you're accelerating up a long grade?

Does the transmission whine? Do the gears whine when you coast? How about thumping tires? Or can you hear a bad wheel bearing or axle bearing clicking?

Can you maintain steering control with ease? Does the vehicle want to go one way or the other when you relax your grip on a straight, smooth section of road? Does the steering wheel shudder back and forth? If the vehicle does wander, do you have to turn the steering wheel a lot before it starts to correct?

Do the brakes pull to one side or the other? Is the pedal firm? Does it stay firm? Or do you get a rhythmic feedback to tell your foot that something is out of round?

(right)

Can you move away from a stop on a hill without rolling backwards? Does the engine stumble or hesitate when asked to go?

continued

Does it take the same amount of room to turn right as it does left when the steering wheel is full against the stops? How's the body lean? More to one side than the other?

(left) Do the driving tires lose their grip? **(right)** With the emergency brake engaged, does the vehicle creep in gear? Does the engine jump around when torqued against the brakes in gear? Do the belts squeal?

(left)
Is there enough power to overcome the brakes?

(right)
Does the driveline clunk when you shift from a forward gear to reverse and back again? Are the shifts smooth? Do the brakes surge while this is happening? Does the transmission slip under full-throttle acceleration? Are the shifts crisp?

Does the engine run on when you turn off the key? Are there any strange noises when you kill the engine? Are there any when it is dead?

(right)
Is the vehicle leaking anything after the test drive?

Now, you've completely checked out the vehicle, had it examined by a test center and had your favorite mechanic give it the once over — do you buy it?

That depends.

If you discovered some minor problems or a fairly major one and are looking at paying top dollar for the vehicle — forget it. However, if you're still interested, these problems might encourage the seller to drop the price or make the repairs before the sale. You'll, of course, want to weigh how much you're paying against how much it will cost to get the four-wheeler in shape. Do you have the money to get it in shape now?

As with any vehicle purchase, safety should always come first. So the big items will be tires, brakes and steering before engine performance. OK, fine.

Special thanks to Nancy Taylor and Rene Vanderhooft. Vehicles courtesy of Dave Baer, 1st Lt. Randy Turner and Kevin Trapane.

tteecc!h! double tech with tsgt ron lathrop

COMMENT: I own a '72 personal-size car, and I've had a problem with it ever since I bought it four years ago. The front end seems to drift; not constantly to one side or the other, but following the lay of the road.

If there is a crack in the road, no matter how small, when I drive across it, both the right side and left side hang in the crack, making it very dangerous. If it is a large crack I have to steer into it to get more of a 90-degree angle into the crack. It seems to steer OK when I head perpendicular to cracks in the road, but the closer I get to being parallel to the cracks, the more it seems to grab hold, making it feel like I'm weaving back and forth across a set of railroad tracks!

When I'm on a flat road it still seems to drift to the left and right, making me steer to compensate for the drift. It's getting scary to go out for a drive these days with the roads getting smaller and me with that monster. Believe me, I've almost sideswiped a car or two weaving back and forth on the narrow streets where I live.

This is the third '72 car I've owned made by the same company, and I've become quite familiar with the type. Besides asking a lot of questions, and taking it to a lot of front end shops, here's what I've done to it:

First, I thought it just needed a front end alignment, but that didn't help a bit. Second, I thought it might be the tires I had on it, so I put a set of bias-ply 70-series all the way around. That didn't help much at all either.

Third, I took it back to the dealer that I had align the front end the first time. They aligned it again, but this time they told me that in order to get a more accurate alignment, I would have to take it to a frame shop and have them stretch the frame out to put more shims in so they — the front end aligners — could adjust the camber. (Well, actually, I forgot whether they said they needed the shims for the camber adjustment or the caster adjustment. I've had the problem so long, I forget.)

Anyway, I took it to a reputable frame shop who stretched the frame and aligned the front end. And still no major improvement. The boss at the frame shop was baffled and could only give me a few suggestions which I added to all the other suggestions I'd gotten since I obtained the problem.

I even got hold of the previous owner to see if it had been in an accident. He told me it hadn't been in an accident, and had started the drifting over a long period of time.

Left with nothing but the problem, I bounced around from shop to shop changing parts. I changed the shocks, springs, left and right tie rods, right idler arm, left and right lower ball joints, and a power steering pump. And still it drifts all over the road.

The only suggestion I have left to use is replacing the power steering gear box. I have also adjusted the set screw at the top of the power steering gear box, which only adjusts the play from left to right in the steering wheel, which isn't the problem.

This is getting quite expen$ive, and it looks to have no end. Can you offer any concrete suggestions on what my next step should be in finding the solution to my problem?

REPLY: Cars that follow the cracks in the road are "nibbling," and nibbling is usually a tire problem. Start with the tire basics: are the pressures correct for the vehicle and tire sizes as well as even? I'm also not surprised that your new tires had no effect on the problem. Seventy-series bias-ply tires are notorious for wandering and nibbling.

Ruling out a tire problem, move on to suspension problems. You've been working your way down the list. You've already overdone the wheel alignment tolerance bit. You've also taken care of broken springs (don't forget to look at the rear springs too as a rear-steer situation can feel like a front end problem), defective shock absorbers (again, don't neglect the rear units) as well as worn or binding idler arms, ball joints and steering linkage. That set screw actually centers the steering gear, which can cause wandering — but you've corrected that, right?

There are three other areas that I would check before replacing the steering gear box.

Loose or worn wheel bearings top the list. Next check the strut rod or control arm bushings for excessive wear. Finally, check to make sure that the stabilizer bar hasn't been removed by some misguided soul looking to improve the car's ride. And if it is in place, check to make sure it isn't defective.

Then replace the steering gear.

COMMENT: My '74 air-cooled German economy car suffers from an unusual malady. Everytime the temperature falls below zero degrees Fahrenheit the headlights and windshield wipers will not operate until after the car has been driven for about 10 minutes. Is there a temperature-sensitive component somewhere in this circuit?

REPLY: Sounds like you've got a problem in among all those connections in the steering column. You need a good electric circuit tracker who's willing to work when the temperature falls below zero.

EDITOR'S NOTE: If you have a general interest automotive comment or question that you would like to see answered in print, and feel others could use the knowledge also, send it to:

DOUBLE TECH
HQ AFISC/SEDD
Norton AFB, CA 92409

Be sure to include all available information which may help in finding the correct solution.

RV SAFETY

The Center for Auto Safety has concluded a two-year study of safety and warranty records for recreational vehicles. In a 113-page report, the Center has reported the vehicles' worst design hazards and construction characteristics, compiled from crash and litigation records, government research, consumer complaints, and information from industry whistle blowers.

The report notes fires are eight times more common in RVs than in automobiles. Fire hazards are associated with the use of flammable materials in RV interiors, including plastics, plywood paneling, and flammable insulation. RVs are not required to meet the relatively weak flammability standard set by the government for auto interiors and, if they weigh over 10,000 lbs., are not required to meet the fuel system integrity standard.

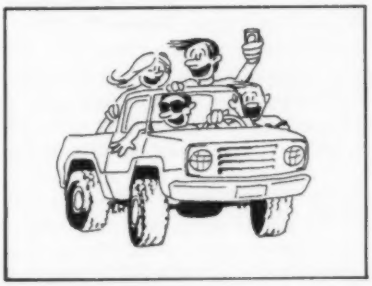
RVs are often equipped with liquid propane gas tanks for cooking and refrigeration purposes. Such tanks, if strapped on the outside of the vehicle, are particularly vulnerable to penetration and fuel leakage in crashes, the study says. In addition, appliances such as refrigerators can break loose during crashes, often blocking escape routes.

Additional problems highlighted by the study include inadequate protection for occupants in crashes, handling and stability problems, and poorly designed brake systems. Warranty abuses also abound, the Center reports, with many customers complaining about unsatisfactory repairs.

TRAFFIC FATALITIES EXPECTED TO INCREASE

It took 52 years from the time the first traffic fatality was reported in the U.S. for the cumulative toll to climb to one million. That occurred in 1951. The two millionth fatality occurred in 1974, 23 years later. Based on the newest government projections, the toll will reach three million by 1990, after an interval of only 16 years.

A new publication, "Traffic Safety Trends and Forecasts," estimates 19,000 more people may die each year on our nation's highways by 1990 than were killed last year. The largest part of the increase, approximately 10,000 a year, will be the result of continued downsizing of passenger cars and increased numbers and mileage of heavy trucks. Other factors will be the increase in the number of persons driving; an increase in vehicle miles traveled; more fatalities because of higher speeds; greater use of two-wheel vehicles, and an increase in pedestrial fatalities.



RAISING THE LEGAL DRINKING AGE

The National Transportation Safety Board has called on the governors and legislators of 35 states and the District of Columbia to raise the legal minimum age for purchasing and drinking alcohol to 21. Adoption of the recommendation by state officials would establish a nationwide drinking age of 21. Of the 25,000 persons killed in alcohol-related crashes last year, 35 percent were in the 16-to-24 year-old age group. The NTSB views the high fatility rate among young people as "grossly disproportionate" and "a national scandal."

In the states that have raised the drinking age back to 21, there has been an over-all average 28 percent reduction in nighttime fatal accidents involving 18-21-year-old drivers.

JEEP CJS

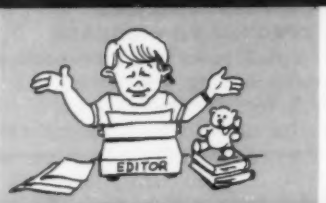
The Federal Trade Commission has announced a final agreement with Jeep Corporation and American Motors Corp. requiring the companies "to cease, among other things, failing to disclose that the four-wheel drive Jeep CJs handle and maneuver differently from ordinary passenger cars under certain reasonably expected driving conditions." (For a detailed review of CJ driving characteristics, see "Rollover Accidents," Dec 81 DRIVER.)

The FTC order requires the company to attach a sticker to the windshield of all new Jeep CJs that warns owners of the vehicles' handling and maneuvering limitations. Jeep must also send the sticker to all current registered owners of the vehicles. The order further requires all existing Jeep CJ owners' manuals to include a supplement on on-pavement driving and new manuals to include this information. The supplement is to accompany the windshield stickers when they are sent to current owners.

WHY IS THIS MAN SMILING?

Because he was wearing a full face helmet when he crashed on his motorcycle, and did not break his jaw, his nose, and his front teeth!

BACKfire
LETTERS to the EDITOR



HUMOR?

Your magazine is a very good publication, but in the "In and out of tight spots" section, some of the choice answers were very childish, and did not fit in with the seriousness of the article.

I personally hope to see more situational questions as the ones presented in your May '82 issue. But, please make them more professional (the choices, that is). They should be made to stimulate the reader's mind. Getting the reader (driver) to think about the situations that are presented, as well as pondering upon some situations that he/she might have come up against, or even have some of which they have thought of that could crop up at any time. Because, we all know that it can be pretty rough on those roads, and the most unexpected can happen.

Thank you for a wonderful publication, and also for your time.

HM2 Michael A. Smeltz, USN
Washington, DC 20350

Sorry you didn't like the humor. The other responses we've received to that article have been positive, with even some requests to reprint it. We use humor because we like you to have fun while you're learning. If you'll look again you'll see there were at least two serious answers for every situation.

PHILOSOPHIES VARY

Reference the article entitled "Conspic-You-Us" by CMSgt. David P. Cushing, SSgt. Warren L. Baynard's letter to the editor concerning same in the June 1982 issue and your reply to SSgt. Baynard.

I disagree with your "Sorry, Warren . . ." response. As a veteran rider with a greal deal more than 100,000 accident-free miles to my credit, I'll continue to use the left track as first preference and the right one as second preference. I'll leave loose sand, rocks, nails, and other debris as well as oil, grease, and gas drippings in the center of the lane where car and truck traffic have thrown it.

Riding philosophies do vary, of course, with conditions. My own sacred first rule is always to guarantee twice the maneuvering room required to get away from any trap. This separation from other traffic is itself an aid to visibility.

Derald A. Metzger
Cocoa, FL 32922

Our "Sorry, Warren" response said that oil, grease and gas droppings in the center of the lane cause stability problems only within 100 feet of an intersection. This is still our advice, but we won't argue with 100,000 accident-free miles! On the other-hand, our expert here – a Motorcycle Safety Foundation Chief Instructor – has over 400,000 accident-free miles and he prefers the center of the lane.

RELIABLE INFORMATION

I had never heard of your magazine, but I happened to find your March 1982 issue lying along the side of the road. I found it to be interesting and quite informative.

I did, however, notice some erroneous information given out which should be corrected. In the Timely Topics on page 27 under Driver's License Extensions, the last paragraph, it states, "Iowa is the only state that extends dependents' driver's license expiration dates."

This is not true. Nebraska does also. A person with a Nebraska operator's license, on active duty as a member of the armed forces outside of Nebraska, and his/her spouse and dependents, has a non-expiring driver's license which does not expire until 60 days after date of separation.

Leon E. Cederlind,
Nebraska Patrol
Grand Island, NE 68801

The item in our March "Timely Topics" section was furnished by the Air Force News Service. Unfortunately, the data was not checked by DRIVER before publishing and much of it was not current. The only way to get reliable information about your driver's license is to write your state's licensing agency. Keep the letter they send you in reply! We have heard from two people licensed in the same state who got totally different responses to their inquiries about license extensions for residents on active duty.

'MAKING IT CLICK'

I just wanted to write and let you know that I've been reading articles in DRIVER for sometime. There seems to be more and more regarding accidents that could have been less serious by seat-belt use. This information really started sinking in.

I had never used seat belts while I was growing up and this habit just ran over into my adult life as well. After I got married, my husband said on trips we should wear them.

Since reading your articles, I made it a point to start wearing my belt any time I'm in my car or truck. At first it was an effort to remember to "buckle up." Now I'm used to it and really don't think too much about it.

My husband sees me buckling up and has started to do the same. It is just as well since the base is starting to spot-check vehicles for seat belt usage. Since we started before the mandatory requirement, it will be an easy transition for us.

I just thought that you'd like to know that two people are "making it click" through your efforts.

Thanks!

P.S. Where do you go to have seat belts adjusted? I think the belt on the driver's side is too loose. My husband thought that maybe they tighten up on impact.

JoAnn Kacalauskas
Wright-Patterson AFB OH 45433

Today's motion-sensitive belts require a lot of deacceleration to activate, so they often feel very loose. Hard braking from five to 10 mph should lock them up. Otherwise, check with your local car dealer.

CUTE DECALS

Next time you see a truck with one of those cute decals "this truck pays $6,000 each year in road use taxes" remember this little known fact. A truck passing over a road puts the same wear on the road as 100 cars. (Wear is exponentially proportional to weight.) Couple this with an estimate that the same truck probably covers three times the miles a car does and you see that the average car driver should pay about $20 a year to keep even with the trucker. Believe me, you pay more than that in gasoline taxes, tag fees, etc.

So when DAC Edward C. Handler (July '82 DRIVER Backfire) suggests taxing bicyclists I can't support him. For one, the bicyclists fair share, based on the wear on the road, would be less than a buck and simply not worth collecting. Additionally, the pedestrians should then just as well be taxed. Further, it is my feeling that if anything the cyclists should be rewarded for their efforts to reduce the number of petrol dollars being sent to the Middle East.

Which brings me to John W. Ecklin's letter (same issue) in which, among other things, he complains about sharing the road with bicyclists. I've been in his position but feel he misstates his objection. The gas used in passing a bicyclist is small, even when summed over all the cars that pass him/her, when compared with the fuel saved by the cyclist. The difference is in who pays for it. And still you pay for it by choice. You chose to drive rather than bike. Get out there and bike too! You'll be helping our air, our economy and your health.

I believe that if cancer cells could talk they too would complain about the healthy cells in the patient as the healthy cells make them look bad. But we won't help the patient by destroying the good in it.

Capt. W.M. Clifford, USAF
Ladson SC 29456

Road taxes are used for things other than road building and maintenance, including public transportation systems.

UPSET

I recently read a letter in the July 1982 issue that has me so upset that I had to write. The letter concerned bicycles and riding them on the roads that we "do not pay for." I for one do pay for the roads in the form of state, federal and gasoline taxes.

The person writing the letter also stated that he rides on bike trails and paths. I use my bike for my primary mode of transportation and find it very difficult to ride on bike trails that are too few and far between, not to mention that they generally go nowhere near the places I need to go.

As to the stupidity of trying to mix a 20-40-pound vehicle with 2,000-pound vehicles this is ridiculous. If a bike rider has proper safety equipment (helmet, gloves, reflectors, etc.) and a bicycle in good operating condition there should be no problem with the mix unless the rider himself is unknowledgeable in proper riding techniques.

Also, the drivers of cars could use some training on how to deal with bicycles on the road.

A point of interest: the roads were originally developed for bicycles and not motor vehicles.

ET2 John Allan, USCG
Chatham MA 02633

We always thought roads were originally built for oxen and carts.

HECTIC DRIVING

Here in Saudi Arabia, driving is hectic, to say the least. As a result, I give the subject of seat belts a lot of publicity. Of 60 people surveyed within our organization and with 29 replies, 74 percent of the drivers and 45 percent of front seat passengers indicated they wear seat belts. There is a disparity in the figures because women are not permitted to drive. Our group, a mixture of U.S. military, DOD civilians and contractor dependents, is quite traffic safety conscious and I believe the percentage is pretty good.

I might add, however, that driving in the Kingdom is more than hectic, it is plain frightening, which I am sure accounts for such a high percentage (of belt use). My next goal is to up those back seat figures.

Raul E. Saralegui,
Ground Safety Chief,
APO New York 09616

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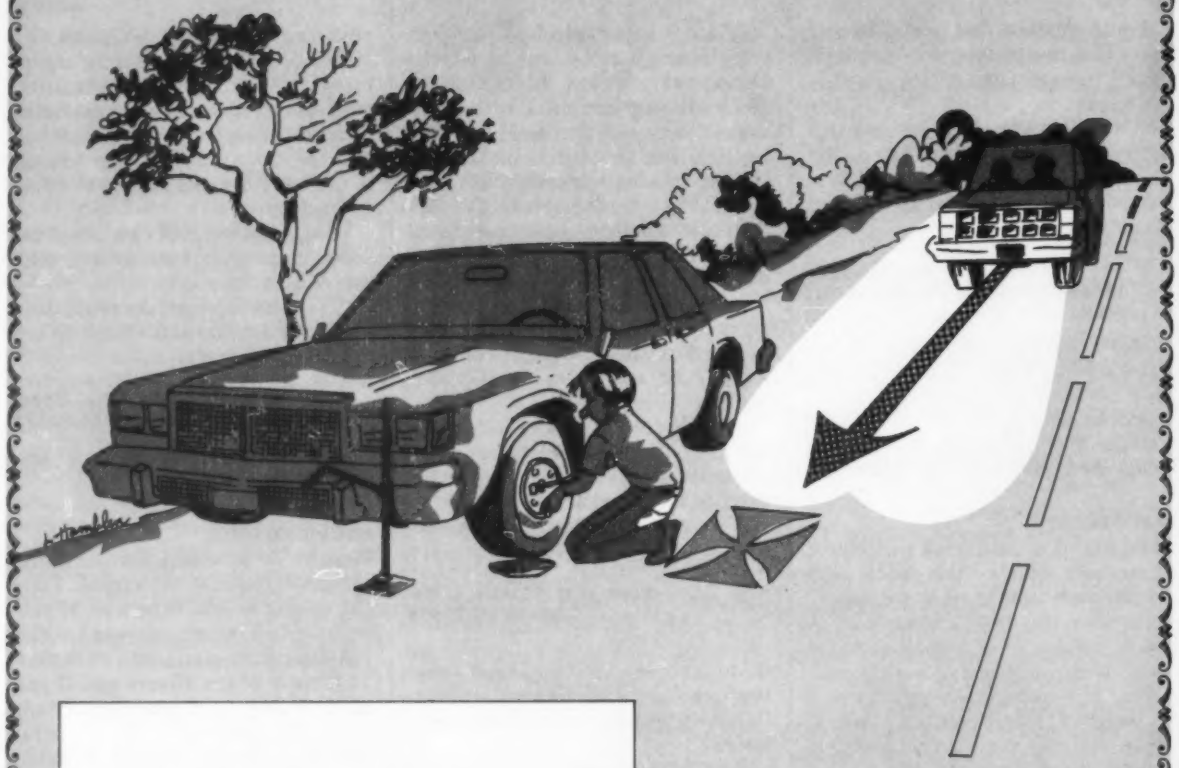
WORKING at the ROADSIDE



This classic pedestrian accident happens to a person who was a driver until the vehicle broke down. The problem is usually mechanical and not running out of gas. The car is parked where parking ordinarily would not be allowed or would be unwise, usually on a major highway. It is after dark and the vehicle is not displaying lights or flashers. Flares or other signals have not been set out. Most victims are young men, and they are frequently struck by a driver who has been drinking.

Don't attempt emergency repairs under these conditions. Put your personal safety first.

(Information courtesy of Lawrence Pavlinski, NHTSA)